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EXAMINER
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O HERN, BRENT T

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/506,419	<b>Applicant(s)</b> RASMUSSEN, OLE-BENDT	
	<b>Examiner</b> Brent T. O'Hern	<b>Art Unit</b> 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 37,38 and 74-117 is/are pending in the application.
- 4a) Of the above claim(s) 37,38,74,75 and 101-117 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 76-100 is/are rejected.
- 7) ☒ Claim(s) 77,94,95 and 98 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claims***

1. Claims 37-38, 74-117 are pending in the application. Claims 37-38, 74-75 and 101-117 are withdrawn.

### **WITHDRAWN REJECTIONS**

2. The 35 U.S.C. 112, second paragraph rejections of claims 1-22, 53-60 and 65-70 of record in the Office Action mailed 30 May 2006, page 2, paragraph 2, have been withdrawn due to Applicant's amendments in the Paper filed 10 October 2006.
3. The 35 U.S.C. 102(b) rejections of claims 1-2, 10, 12-13, 19-20, 57 and 66 as being anticipated by Britton (US 4,454,184) of record in the Office Action mailed 30 May 2006, page 4, paragraph 4, have been withdrawn due to Applicant's amendments in the Paper filed 10 October 2006.
4. The 35 U.S.C. 102(b) rejections of claims 1-2, 10, 13-14, 18-20, 57, 66 and 70 as being anticipated by Lappala (US 2,851,389) of record in the Office Action mailed 30 May 2006, page 7, paragraph 5, have been withdrawn due to Applicant's amendments in the Paper filed 10 October 2006.
5. The 35 U.S.C. 103(a) rejections of claims 4-7, 21, 53-56, 58-59 and 68 as being obvious over Lappala (US 2,851,389) of record in the Office Action mailed 30 May 2006, page 10, paragraph 6, have been withdrawn due to Applicant's amendments in the Paper filed 10 October 2006.
6. The 35 U.S.C. 103(a) rejections of claims 3, 58 and 67-69 as being obvious over Lappala (US 2,851,389) (or Britton (US 4,454,184), with regards to claims 3, 67 and 69), as applied to claim 1, in view of Johnston (US 3,340,128) of record in the Office

Action mailed 30 May 2006, page 12, paragraph 7, have been withdrawn due to Applicant's amendments in the Paper filed 10 October 2006.

7. The 35 U.S.C. 103(a) rejections of claim 15 as being obvious over Lappala (US 2,851,389) (or Britton (US 4,454,184), as applied to claim 1, in view of Velazquez (US 5,614,297) and Cederblad et al. (US 6,204,207) of record in the Office Action mailed 30 May 2006, page 14, paragraph 8, have been withdrawn due to Applicant's amendments in the Paper filed 10 October 2006.

8. The 35 U.S.C. 103(a) rejections of claims 22 and 60 as being obvious over Lappala (US 2,851,389) or Britton (US 4,454,184), as applied to claim 1, in view of Cederblad et al. (US 6,204,207) of record in the Office Action mailed 30 May 2006, page 15, paragraph 9, have been withdrawn due to Applicant's amendments in the Paper filed 10 October 2006.

9. The 35 U.S.C. 103(a) rejections of claim 65 as being obvious over Lappala (US 2,851,389) or Britton (US 4,454,184), as applied to claim 1, in view of Bonke et al. (US 6,299,966) of record in the Office Action mailed 30 May 2006, page 16, paragraph 10, have been withdrawn due to Applicant's amendments in the Paper filed 10 October 2006.

### ***Specification***

10. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Applicant is advised to write all section headings in **capital letters** and insert any **section headings** where applicable, such as "BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S)" on page 24 of Applicant's Specification.

#### **NEW OBJECTIONS**

11. Claims 77, 94, 95 and 98 are objected to because of the following informalities: the claims depend on **cancelled claim 1**, perhaps Applicant meant claim 76. Appropriate correction is required.

**NEW REJECTIONS**

***Claim Rejections - 35 USC § 112***

**12.** Claims 76-100 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase “**unbalanced biaxial molecular orientation**” in claim 76, lines 4-5 is vague and indefinite because it is unclear what is the difference between biaxial molecular orientation and unbalanced biaxial molecular orientation.

The phrase “**in sufficient amount and/or coloration**” in claim 78, line 3 is vague and indefinite because to one of ordinary what amount is sufficient and what is the basis of determining when an amount is sufficient. Furthermore, it is unclear how it is possible for there to be “coloration material in sufficient amount and coloration to render” when the term “and” is used as opposed to the term “or”.

The phrase “**general thickness**” in claim 97, line 1 is vague and indefinite because it is unclear what is the difference between “general thickness” and “thickness”.

Claim 97 recites the limitation "A-side" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Clarification and/or correction is required.

***Claim Rejections - 35 USC § 103***

**13.** Claims 76-77, 83-85, 88-89, 93 and 96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Britton (US 4,454,184) in view of Rasmussen (US 4,039,364).

Regarding claim 76, Britton ('184) teaches a cross-laminate (*FIGs 4 and 8, #11a and #12a*) comprising at least one pair of two adjacent films A and B which are laminated together in sandwich relation (*col. 6, ll. 23-26, multiple layers 3, 4, 5 and 6*)

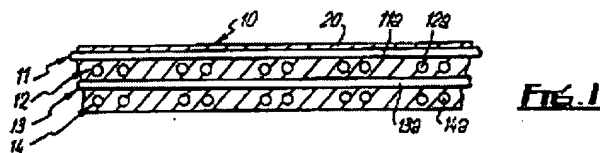
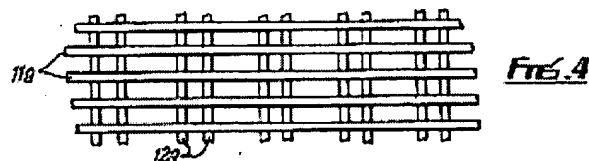
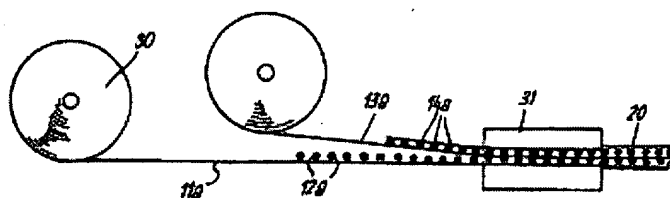
with the main direction of orientation in film A crossing the main direction of orientation in film B (*FIGs 4 and 1 wherein #11a, #12a, #13a and #14a cross each other*), and

the films each comprises a continuous main layer consisting of a polymer material (*See col. 2, ll. 42-47 and FIG-4, continuous films of adhesive above and below the strands.*)

on at least the mutually facing sides of the main layers a first surface layer of a different polymer material (*See col. 2, ll. 42-47*)

and interposed between each first surface layer and its main layer a second surface layer of a different polymer material (*FIG-1 and col. 2, ll. 45-58*),

the first surface layer on the main layer of each of the films A and B being a discontinuous layer (*See Fig-1 wherein the strands are not a solid sheet thus discontinuous in the direction between the strands and wherein the adhesive is not discontinuous between the strands.*), consisting of at least one array of coextruded thin strands with strands in the arrays of the two films arranged in crossing relation to one another (*FIGs 4 and 1 wherein the strands cross each other*) and obviously teaches wherein the lamination strength is highest at the strand crossing points as it is well known that strand crossing points have stronger lamination strength than non crossing point areas (*col. 3, ll. 1-19*), however, fails to expressly teach wherein each of the films A and B having an uniaxial or biaxial molecular orientation.

**FIG. 1****FIG. 4****FIG. 8**

However, Rasmussen ('364) teaches wherein each of the films A and B having an uniaxial or biaxial molecular orientation (*col. 6, ll. 1-5*) for the purpose of producing durable tarps for heavy duty applications (*col. 1, ll. 16-19*).

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to either uniaxially or biaxially orient the films as taught by Rasmussen ('364) in Britton ('184) in order to provide durable tarps for heavy duty applications.

The phrase **"separately coextruded"** in claim 76, line 2, **"at least partially by heating"** in claim 76, line 3, **"coextruded"** in claim 76, line 14, claim 85, line 2 and **"continuous extrusion"** in claim 93, line 2 are **process limitations** in a product claim and hence not given any patentable weight since patentability of a product does not depend on its method of production (*see MPEP § 2173.05(p)*).



The phrase **“selected to give high tensile strength”** in claim 76, line 8, **“the polymer material of said second surface layers being selected to control the lamination strength in the strand-free regions thereof and the polymer material of the strands being selected to control the lamination strength at the crossing points of the strand arrays”** in claim 76, lines 16-20 are not given any patentable weight since the applicant is introducing non-structural **functional language** into the product claims (*see MPEP 2173 (q)*) and (*See MPEP 2173.05(g)*).

Regarding claim 77, Britton ('184) teaches wherein the strands in the respective arrays are in contact with one another at their crossing points and are of a polymer such as to be directly laminated to each other at the crossing points (*col. 3, l. 8 “spot welded” strands and col. 3, l. 17 “fused laminate”*).

Regarding claims 83 and 96, Britton ('184) obviously teaches wherein the lamination strength at the crossing points of the thin strands of the arrays is at least 40 g cm<sup>-1</sup> and a lamination strength in the strand-free regions of the cross-laminate is not more than 50% of the lamination strength at said crossing points of the strands thereof, as measured by a peel test carried out on narrow specimens of the cross-laminate at a velocity of about 1 mm sec<sup>-1</sup>, and the lamination strength in the strand-free regions is at the highest 75% of the bonding strength between the strands at the crossing points, as measured by the peel test since a structure with an equivalent structure would also have the same lamination strength (*col. 2, ll. 42-58*).

Regarding claim 84, Britton ('184) teaches wherein a cross-laminate comprising an assembly of a common film A having a main layer with a strand-formed first surface layer on both of its surfaces and a second continuous layer interposed between each

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the first surface layer and the main layer and two exterior films B each having on at least one of its sides a strand-formed first surface layer of each the exterior film B facing toward the common film A with the strands thereof bonded to the strands of the common film A (*see col. 6, ll. 23-26 and FIG-1 wherein an additional layer such A with a strand is placed on top of the laminate*).

Regarding claim 85, Britton ('184) teaches on at least one of its outer films, an exterior surface layer of a polymer material (*col. 2, ll. 42-58*).

The phrase **“adapted to enhance a surface property of the laminate selected from its heat-sealing capability or its frictional properties”** in claim 85, lines 3-4 is not given any patentable weight since the applicant is introducing non-structural **functional language** into the product claims (*see MPEP 2173 (q)*) and (*See MPEP 2173.05(g)*).

Regarding claim 88, Britton ('184) teaches wherein the second surface layer includes an adhesion modifying material (*col. 2, ll. 42-58*).

The phrase **“to establish a blocking between the contacting mutually facing strand-free regions thereof”** in claim 88, lines 2-3 is not given any patentable weight since the applicant is introducing non-structural **functional language** into the product claims (*see MPEP 2173 (q)*) and (*See MPEP 2173.05(g)*).

Regarding claim 89, Britton ('184) obviously teaches wherein the first surface layer on at least one of the films A and B comprises at least two of the arrays of strands, and the strands of the differing arrays being interspersed with one another as such material has a appearance depending upon how viewed or processed (*col. 2, ll. 25-58*).

The phrase **“at least one of the two arrays being formed of a polymer material differing in appearance from another of the two arrays”** in claim 89, lines 4-5 is not given any patentable weight since the applicant is introducing non-structural **functional language** into the product claims (*see MPEP 2173 (q)*) and (*See MPEP 2173.05(g)*).

Regarding claim 93, Britton ('184) teaches a lamination layer introduced between the films A and B to laminate the films in the sandwich relation (*see FIG-4*).

**14.** Claim 78 is rejected under 35 U.S.C. 103(a) as being unpatentable over Britton (US 4,454,184) in view of Rasmussen (US 4,039,364) and Johnston (US 3,340,128).

Regarding claim 78, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however fail to expressly disclose wherein the polymer material of the strands of at least one of the arrays comprises coloration material in sufficient amount and/or coloration to render the strands visible through at least one side of the cross-laminate.

However, Johnston ('128) teaches wherein the polymer material of the strands of at least one of the arrays comprises coloration material in sufficient amount and/or coloration to render the strands visible through at least one side of the cross-laminate (*col. 24, l. 58*) for the purpose of providing a decorative motif (*col. 24, ll. 59-60*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to provide strands with coloration as taught by Johnston ('128) in Britton ('184) in order to provide a product having a decorative motif.

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15. Claims 79-82, 86, 90, 94-95, 97-98 and 100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Britton (US 4,454,184) in view of Rasmussen (US 4,039,364) and Lappala (US 2,851,389).

Regarding claim 79, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however, fail to expressly disclose wherein the thickness of the strands in the first surface layer of each of the films A and B is not greater than 20% of the thickness of the respective film.

However, Lappala ('389) teaches that any suitable diameter strand may be used (*See col. 2, l. 45, any suitable diameter can be used*), which clearly changes the films/laminate ratio. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to select a strand with a diameter that provides the above thickness ratio as taught by Lappala ('389) for the purpose of providing a laminate that is light and strong (*col. 1, ll. 25-28*).

Regarding claim 80, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however, fail to expressly disclose wherein the collective area of the strands in each of the first surface layers constitutes not more than 60% of the area of the respective film side.

However, Lappala ('389) teaches that any suitable diameter strand may be used (*See col. 2, l. 45, any suitable diameter can be used*), which clearly changes the above area ratio. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to select a strand with a diameter that provides the above area ratio as taught by Lappala ('389) for the purpose of providing a laminate that is light and strong (*col. 1, ll. 25-28*).

Regarding claim 81, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however, fail to expressly disclose wherein the thickness increase in each of the films A and B at the locations where the strands are present is at most 20% of the film thickness in adjacent strand-free regions thereof.

However, Lappala ('389) teaches that any suitable diameter strand may be used (*See col. 2, l. 45, any suitable diameter can be used*), which clearly changes the thickness increase. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to select a strand with a diameter that provides the above thickness increase as taught by Lappala ('389) for the purpose of providing a laminate that is light and strong (*col. 1, ll. 25-28*).

Regarding claims 82 and 100, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however fail to expressly disclose wherein the distance from the center-to-center of adjacent pairs of strands in each array is between 2 mm and 40 mm (not greater than 20 mm).

However, Lappala ('389) teaches that any suitable pattern may be used (*See col. 2, l. 49-51, any suitable pattern*) for the purpose of providing a laminate that is light and strong (*col. 1, ll. 25-28*).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to select a suitable pattern that provides the above separation as taught by Lappala ('389) in Britton ('184) in order to provide a laminate that is light and strong.

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Regarding claim 86, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however fail to expressly disclose wherein the main layer of each of the two films A and B consists essentially of polyethylene or polypropylene.

However, Lappala ('389) teaches wherein the main layer of each of the two films A and B consists essentially of polyethylene (*col. 2, l. 31 and ll. 66-67*) for the purpose of providing a laminate that is light and strong (*col. 1, ll. 25-28*).

Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to have layers comprising polyethylene as taught by Lappala ('389) in Britton ('184) in order to provide a laminate that is light and strong.

Regarding claim 90, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however fail to expressly disclose wherein the first surface layer on each of the films A and B constitutes at the highest 10% of the volume of the corresponding film.

However, Lappala ('389) teaches that any suitable diameter strand may be used (*See col. 2, l. 45, any suitable diameter can be used*), which clearly changes the volume. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to select a strand with a diameter that provides the above volume as taught by Lappala ('389) for the purpose of providing a laminate that is light and strong (*col. 1, ll. 25-28*).

Regarding claim 94, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however fail to expressly disclose wherein the thickness of the

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strands in the first surface layer of each of the films A and B is not greater than 10% of the thickness of the respective film.

However, Lappala ('389) teaches that any suitable diameter strand may be used (*See col. 2, l. 45, any suitable diameter can be used*), which clearly changes the films/laminate ratio. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to select a strand with a diameter that provides the above thickness ratio as taught by Lappala ('389) for the purpose of providing a laminate that is light and strong (*col. 1, ll. 25-28*).

Regarding claim 95, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however fail to expressly disclose wherein the thickness increase in each of the films A and B at the locations where the strands are present is at most 10% of the film thickness in strand-free regions.

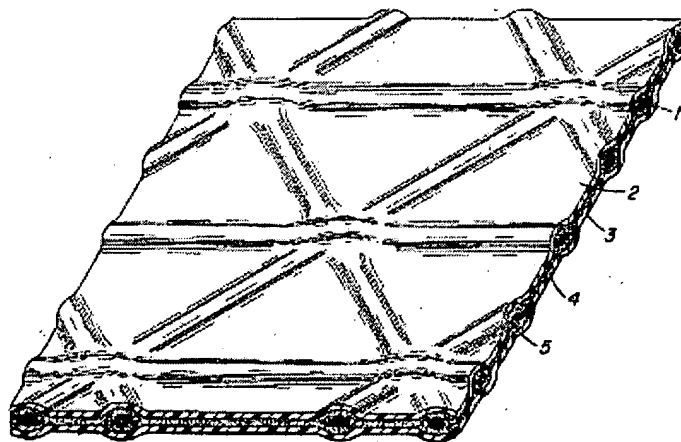
However, Lappala ('389) teaches that any suitable diameter strand may be used (*See col. 2, l. 45, any suitable diameter can be used*), which clearly changes the thickness increase. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to select a strand with a diameter that provides the above thickness increase as taught by Lappala ('389) for the purpose of providing a laminate that is light and strong (*col. 1, ll. 25-28*).

Regarding claim 97, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however fail to expressly disclose wherein a laminate having a thickness at the highest of about 0.3 mm, and a film A is situated at one of its sides, with the spacing of the striations in the pattern being at most about 3 mm, the main layer and

said second surface layer of said film A are substantially transparent to enable the colored strands to be visible when the laminate is observed from the A-side.

However, Lappala ('389) teaches a laminate having a thickness at the highest of about 0.3 mm (*col. 3, ll. 34-35 and col. 2, l. 45 wherein the films are less than 0.015 in (0.381 mm)*), a film A is situated at one of its sides (*FIG-3, #2*), with the spacing of the striations in the pattern being at most about 3 mm (*FIG-3, corrugations created by strands*) the main layer and the second surface layer of the film are substantially transparent to enable the coloured strands to be visible when the laminate is observed from the A-side. (*col. 2, l. 7*), for the purpose of providing a laminate that is light and strong (*col. 1, ll. 25-28*).

FIG. 3



Therefore, it would have been obvious to a person of ordinary skill in the art the time of applicant's invention to provide such a spacing and configuration as taught by Lappala ('389) in Britton ('184) in order to provide a light and strong laminate.

The phrase **"said film A having its exterior surface corrugated to form a visible pattern of striations extending in one direction"** in claim 97, lines 4-5 and



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**“the depth of the corrugations being sufficient to impart a three-dimensional effect to said cross laminate such that the strands appear to be spaced internally from the exterior surface of said film A a distance substantially greater than the actual maximum thickness of said film A”** in claim 97, lines 10-13 are not given any patentable weight since the applicant is introducing non-structural **functional language** into the product claims (*see MPEP 2173 (q)*) and (*See MPEP 2173.05(g)*).

Regarding claim 98, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however fail to expressly disclose wherein the first surface layer on each of the films A and B constitutes at the highest 5% of the volume of the corresponding film.

However, Lappala ('389) teaches that any suitable diameter strand may be used (*See col. 2, l. 45, any suitable diameter can be used*), which clearly changes the volume. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to select a strand with a diameter that provides the above volume as taught by Lappala ('389) for the purpose of providing a laminate that is light and strong (*col. 1, ll. 25-28*).

**16.** Claims 87, 91-92 and 99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Britton (US 4,454,184) in view of Rasmussen (US 4,039,364), Velazquez (US 5,614,297) and Cederblad et al. (US 6,204,207).

Regarding claim 87, Britton ('184) and Rasmussen (364) teach the laminate discussed above, and Rasmussen (364) teaches the laminate wherein each of the films A and B of the main layer is selected from HDPE, LLDPE or a blend of the two (*col. 13, ll. 3-7*), and the strands in the first surface layers of the films is selected from a polymer

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which consists essentially of a copolymer of ethylene (*col. 13, ll. 11-30*), however, fail to expressly disclose wherein the continuous second surface layer is formed mainly of LLDPE in admixture with 5 - 25% of a copolymer of ethylene having a melting point or a melting range within the temperature range of 50 - 80 °C, the strands having a melting point or a melting range within the temperature range of 50 - 100 °C.

However, Velazquez ('297) teaches wherein the continuous second surface layer is formed mainly of LLDPE in admixture with 5 - 25% of a copolymer of ethylene having a melting point or a melting range within the temperature range of 50 - 80 °C (*col. 8, ll. 26-47 and col. 3, l. 46*) for the purpose of providing a film that can be laminated with one or more films (*col. 6, ll. 13-17*).

Furthermore, Cederblad ('207) teaches wherein the strands have a melting point or a melting range within the temperature range of 50 - 100 °C (*col. 12, l. 42 wherein the melting point is 67 °C /152 °F*) for the purpose of forming firm bonds (*col. 6, l. 63*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide a laminate with a surface layer of LLDPE and ethylene with the above melting point range and the above strands as taught by Velazquez ('297) and Cederblad ('207) in Britton ('184) to provide a laminate as described above.

Regarding claims 91-92 and 99, Britton ('184) and Rasmussen (364) teach the laminate discussed above, however fail to expressly disclose wherein the average melting point of the polymer material which constitutes the strand-formed first layer of each of the films A and B is at least about 10 °C/15 °C/20 °C lower than the average melting point of the polymer material which of the main layer.

However, Cederblad ('207) teaches wherein the average melting point of the polymer material which constitutes the strand-formed first layer of each of the films A and B is at least about 10 °C/20 °C lower than the average melting point of the polymer material which constitutes the main layer (*col. 12, ll. 38-53*) for the purpose of providing firm and light bonds (*col. 6, ll. 60-67*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide strands with melting points below that of the films as taught by Cederblad ('207) in Britton ('184) in order to produce a laminate with firm and light bonds.

#### **ANSWERS TO APPLICANT'S ARGUMENTS**

**17.** In response to Applicant's argument (*p. 21, para. 1 of Applicant's Paper filed 10 October 2006*) that the basis for requiring a restriction no longer exists, it is noted that Applicant's argument is not found persuasive for the reasons of record in the Office Action dated 30 May 2006.

**18.** In response to Applicant's argument (*p. 26, para. 2 of Applicant's Paper filed 10 October 2006*) that Britton ('184) does not teach coextruded, it is noted that coextruded, coextrusion etc. are **process limitations** in product claims and hence not given any patentable weight since patentability of a product does not depend on its method of production (*see MPEP § 2173.05(p)*).

**19.** In response to Applicant's argument (*p. 26, para. 2 of Applicant's Paper filed 10 October 2006*) that Britton ('184) does not teach molecular orientation, it is noted that Rasmussen ('364) teaches uniaxial or biaxial molecular orientation (*col. 6, ll. 1-5*) for the purpose of producing durable tarps for heavy duty applications (*col. 1, ll. 16-19*).

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Therefore, it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to either uniaxially or biaxially orient the films as taught by Rasmussen ('364) in Britton ('184) in order to provide durable tarps for heavy duty applications.

20. In response to Applicant's argument (*p. 26, para. 3 of Applicant's Paper filed 10 October 2006*) that the objective of Britton ('184) is quite different from Applicant's invention, it is noted that patentability of Applicant's invention is not based on the objective of Applicant's invention and how Britton's ('184) objective may or may not be different.

21. In response to Applicant's argument (*p. 27, para. 2 of Applicant's Paper filed 10 October 2006*) that the action of the hot probes of Britton ('184) are not precisely synchronized with the spacing, it is noted that Applicant does not claim hot probes, thus the argument is not germane to an issue at bar.

22. In response to Applicant's argument (*p. 27, paras. 3-4 of Applicant's Paper filed 10 October 2006*) that Lappala's ('389) strands cannot be anchored at their crossing points and does not teach coextrusion, it is noted that Lappala ('389) is not cited as teaching anchoring and furthermore, coextrusion are **process limitations** in product claims and hence not given any patentable weight since patentability of a product does not depend on its method of production (*see MPEP § 2173.05(p)*).

23. In response to Applicant's argument (*p. 28, para. 2 of Applicant's Paper filed 10 October 2006*) that Johnston ('128) teaches fibrous products and Applicant's products are not fibrous, it is noted that patentability of Applicant's invention is not determined by additional, possible further teachings of Johnston ('128).

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24. In response to Applicant's argument (*p. 28, para. 3 of Applicant's Paper filed 10 October 2006*) that Bonke ('966) can not teach corrugations, it is noted that Bonke ('966) is no longer used in the rejection of applicant's claims.

25. In response to Applicant's argument (*p. 28, para. 4 of Applicant's Paper filed 10 October 2006*) that it is difficult to comprehend how Velazquez (297) can be transposed to a totally different utility, it is noted that Velazquez ('297) teaches wherein the continuous second surface layer is formed mainly of LLDPE in admixture with 5 - 25% of a copolymer of ethylene having a melting point or a melting range within the temperature range of 50 - 80 °C (*col. 8, ll. 26-47 and col. 3, l. 46*) for the purpose or providing a film that can be laminated with one or more films (*col. 6, ll. 13-17*).

26. In response to Applicant's argument (*p. 28, para. 5 of Applicant's Paper filed 10 October 2006*) that Cederblad ('207) would not suggest the different melting points, it is noted that Cederblad ('207) teaches wherein the strands have a melting point or a melting range within the temperature range of 50 - 100 °C (*col. 12, l. 42 wherein the melting point is 67 °C /152 °F*) for the purpose of forming firm bonds (*col. 6, l. 63*). Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide a laminate with the above melting point range as taught by Velazquez ('297) in order to provide applicant's laminate.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent T. O'Hern whose telephone number is (571) 272-0496. The examiner can normally be reached on M-F, 9:00-5:30.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-2172. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Brent T O'Hern  
Examiner  
Art Unit 1772  
October 25, 2006

  
NASSER AHMAD  
PRIMARY EXAMINER  
10/27/06